

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5002 - L2 Version 4  
Chandra X-Ray Center

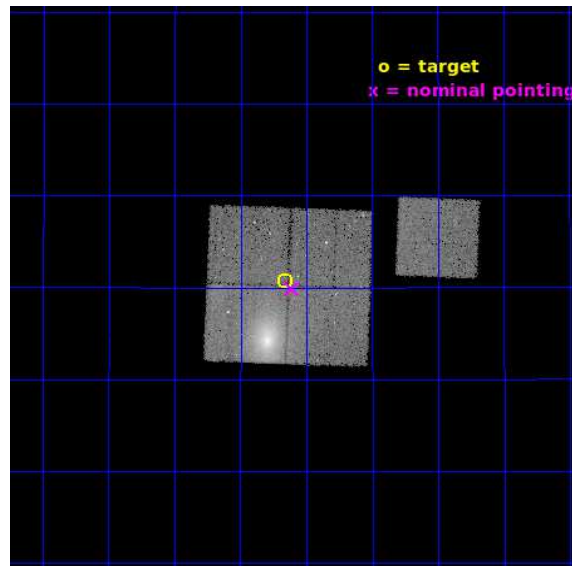
L2 Processing Date : Oct 6 2020

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# 1 Front

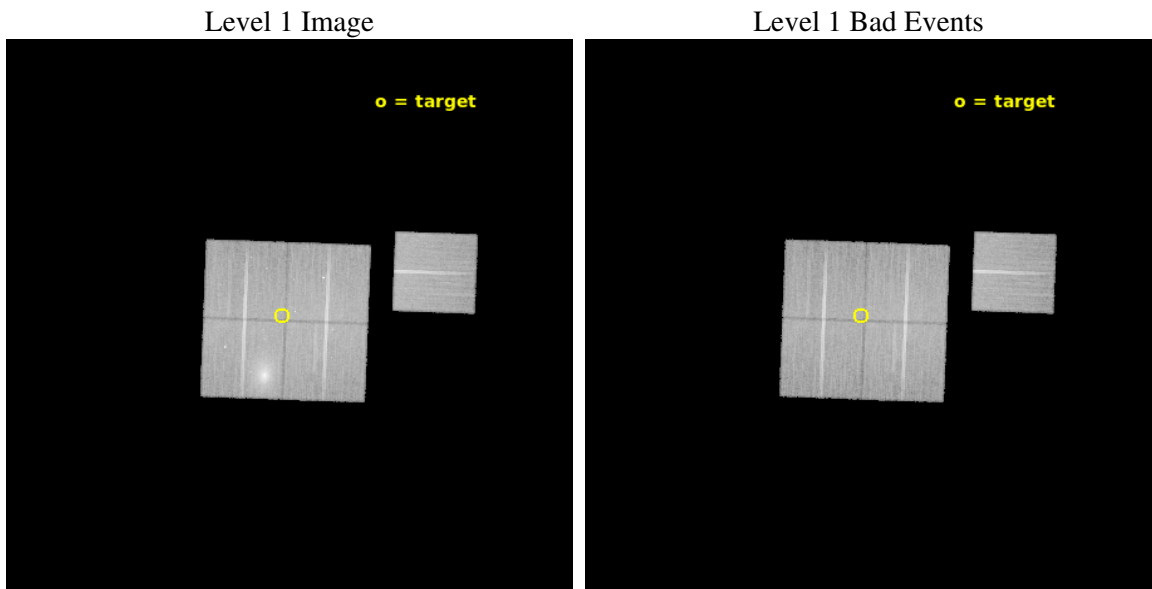
seq_num	800445	Sequence number
obs_id	5002	Observation id
title	Baryon fraction profiles of relaxed clusters at large radii	Propos
observer	Dr. Stephen Murray	Principal investigator
object	A1413	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	178.79	Observer's specified target RA [deg]
dec_targ	23.513	Observer's specified target Dec [deg]
ra_nom	178.77735325128	Nominal RA [deg]
dec_nom	23.498046458652	Nominal Dec [deg]
roll_nom	92.128067130515	Nominal Roll [deg]
revision	4	Processing version of data
ontime	37147.258918375	Sum of GTIs [s]
livetime	36661.902633192	Livetime [s]
ontime0	37147.258918375	Sum of GTIs [s]
ontime1	37150.39992854	Sum of GTIs [s]
ontime2	37144.117928147	Sum of GTIs [s]
ontime3	37140.976967752	Sum of GTIs [s]
ontime6	37147.258958191	Sum of GTIs [s]
l2events	160811	Number of level 2 events



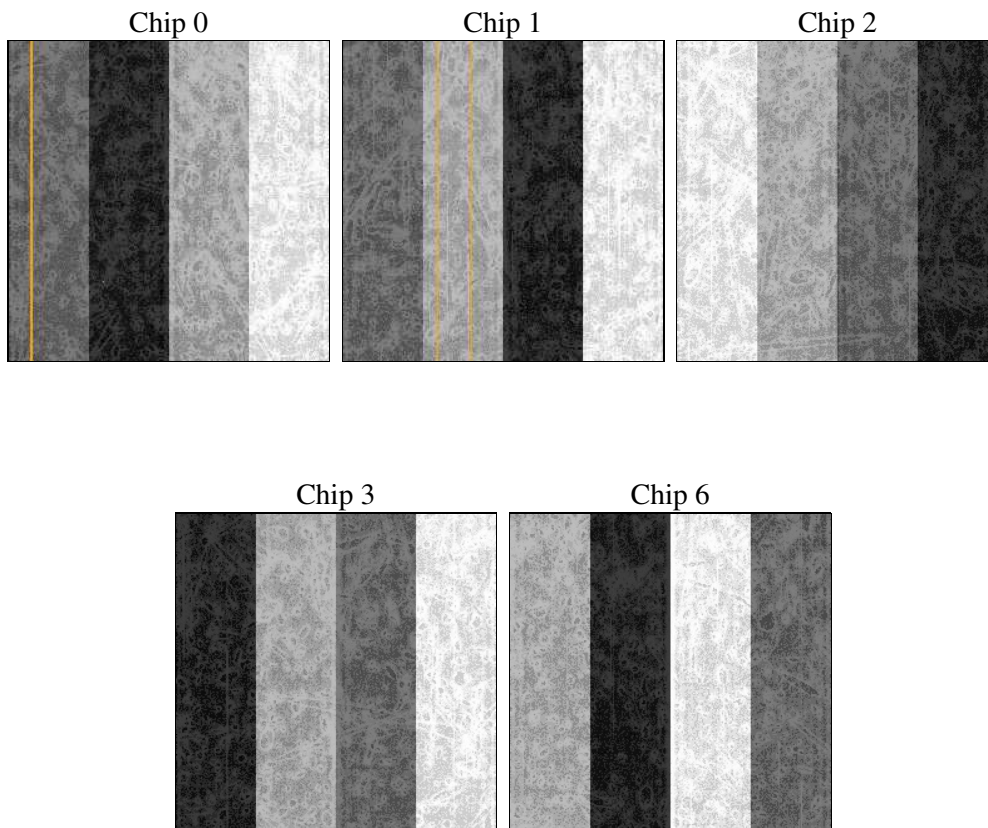
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	37000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	37147.258918375	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	37147.258918375	Sum of GTIs [s]
date	2020-10-06T15:16:26	Date and time of file creation	ontime1	37150.39992854	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	37144.117928147	Sum of GTIs [s]
			ontime3	37140.976967752	Sum of GTIs [s]
			ontime6	37147.258958191	Sum of GTIs [s]
			l1events	1202073	Number of level 1 events

### 2.1.4 Events

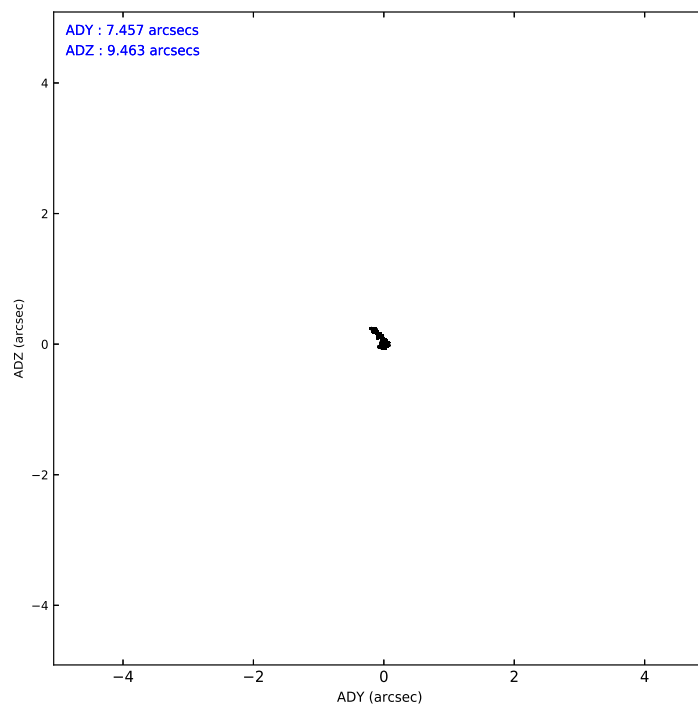
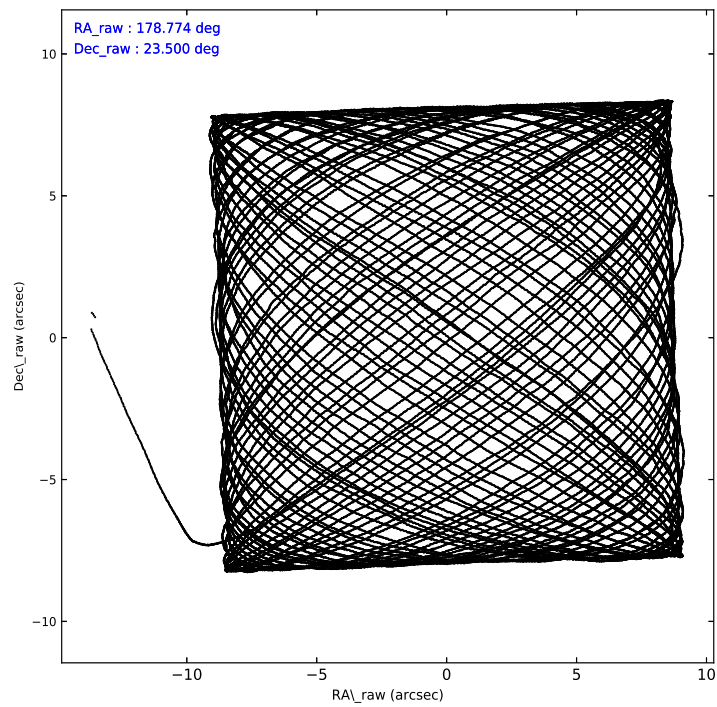
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	214859	279429	243512	237365	226908
rejected events	191067	193299	218351	210822	203903
rejected %	88%	69%	89%	88%	89%

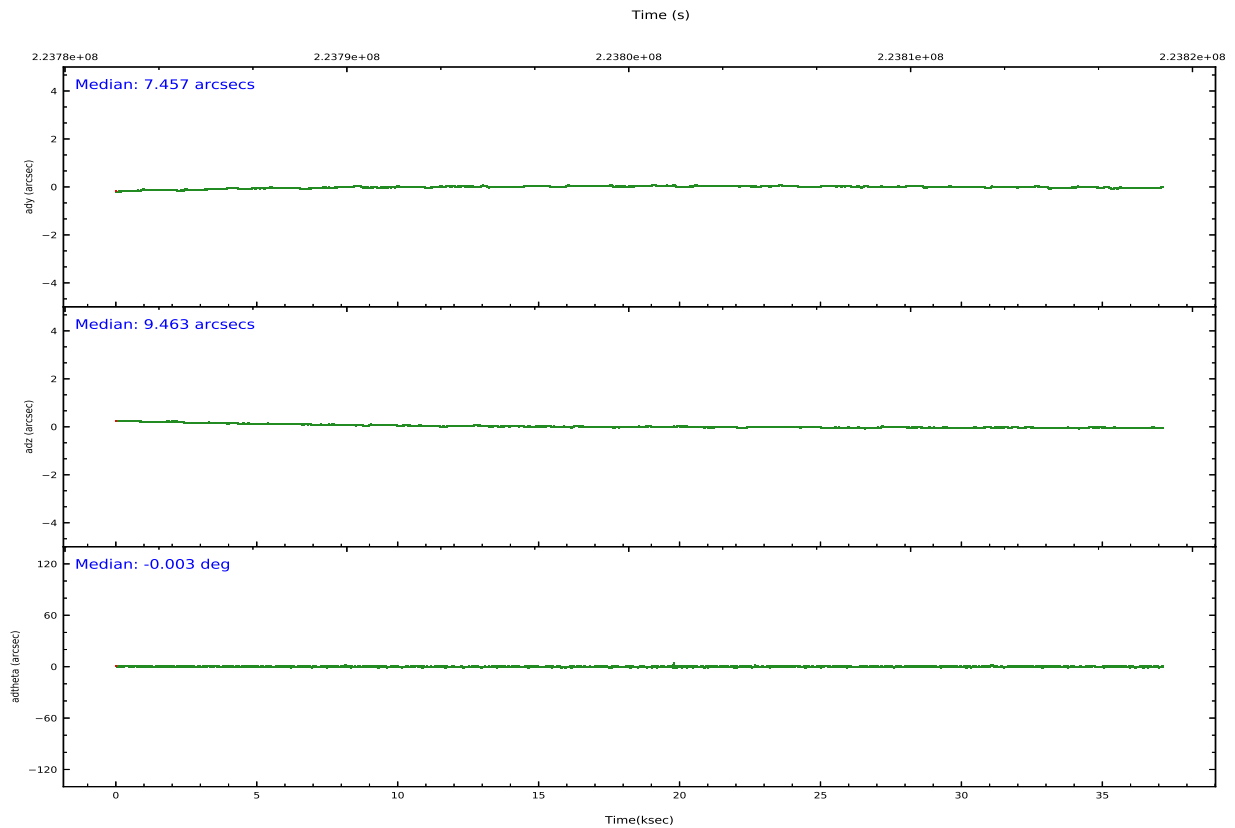
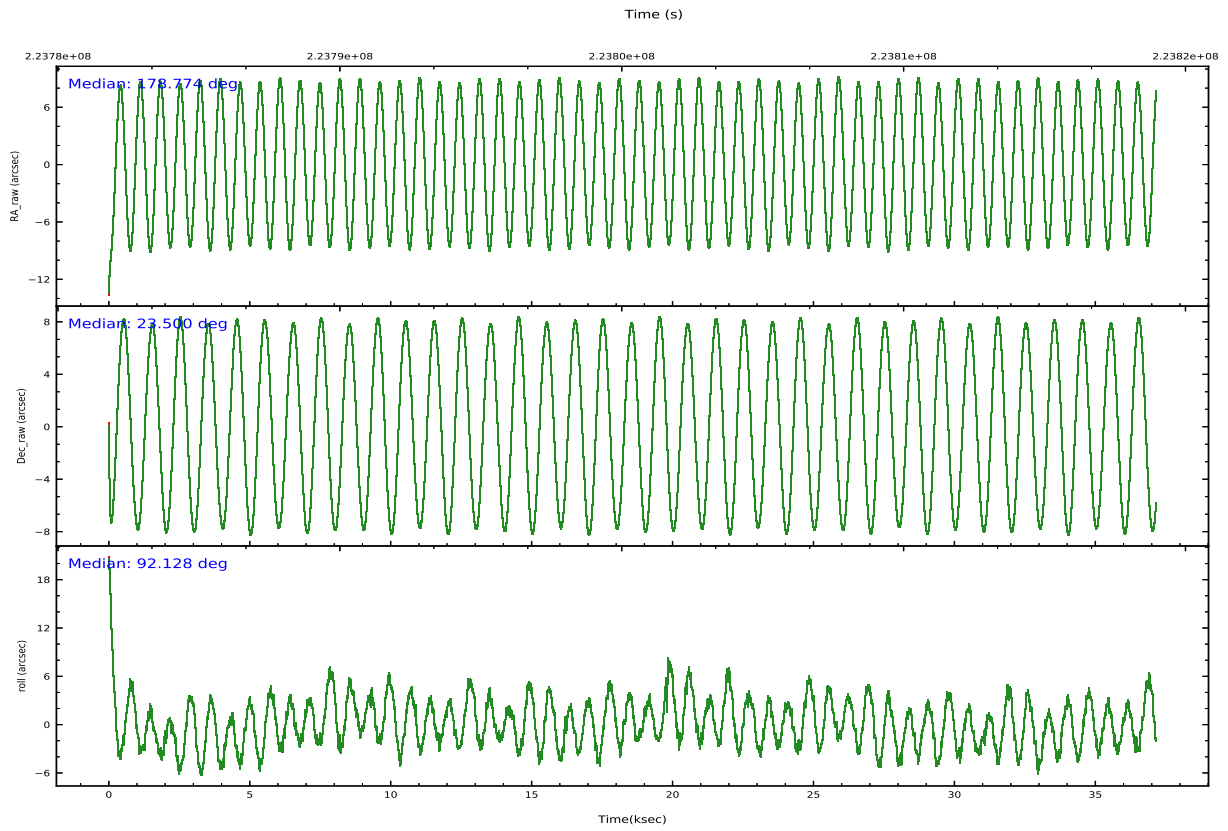
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8993	58247	10452	11742	8096
	4%	20%	4%	4%	3%
grade 1 events	95	275	127	131	78
	0%	0%	0%	0%	0%
grade 2 events	5478	11908	5585	5155	5065
	2%	4%	2%	2%	2%
grade 3 events	2699	4827	2545	2780	2564
	1%	1%	1%	1%	1%
grade 4 events	2468	4892	2593	2685	2546
	1%	1%	1%	1%	1%
grade 5 events	8162	9114	7633	9212	8990
	3%	3%	3%	3%	3%
grade 6 events	4448	6878	4243	4465	5000
	2%	2%	1%	1%	2%
grade 7 events	182516	183288	210334	201195	194569
	84%	65%	86%	84%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	178.790223	178.77735325128	Subarray requested	NONE	NONE
[deg] Pointing Dec	23.476995	23.498046458652	Alternating exposures requested	N	N
[deg] Pointing Roll	91.916016	92.12806713051501	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	223781960.184000	223780769.00338			
Observation start date	2005-02-03T01:38:16	2005-02-03T01:19:29			
[s] Observation end time (MET)	223818960.184000	223819291.58012			
Observation end date	2005-02-03T11:54:56	2005-02-03T12:01:31			
Read mode	TIMED	TIMED			

## 2.3 Aspect





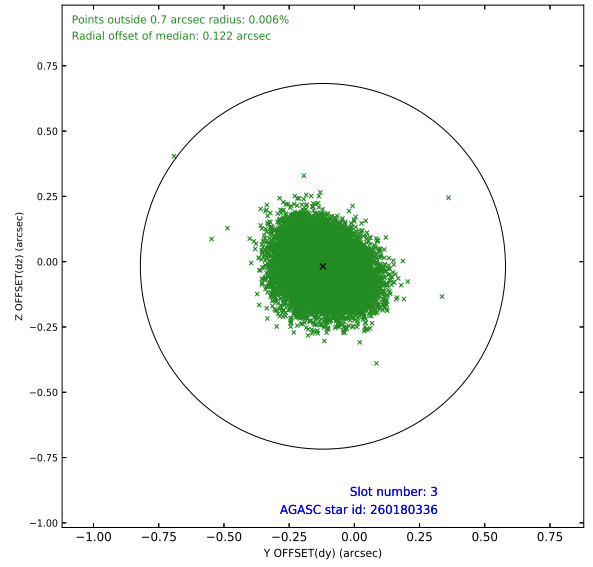
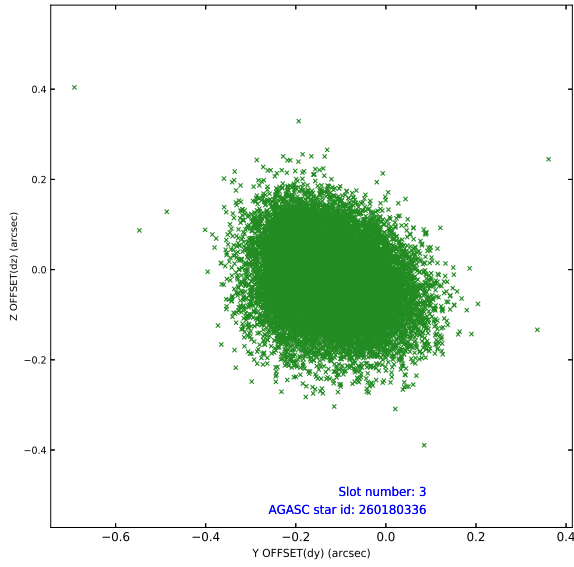
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.25	9062	1.000	0.007	0.012	0.007	0.012	0.000000	0.000000	932.24	-832
1	FID		ACIS-I-5	7.23	9061	1.000	-0.196	0.017	0.006	0.011	0.000000	0.000000	-1816.07	1064
2	FID		ACIS-I-6	7.26	9063	1.000	0.097	0.041	0.007	0.012	0.000000	0.000000	397.82	1709
3	GUIDE	used	260180336	9.76	18102	1.000	-0.120	-0.018	0.124	0.201	178.222989	23.655513	708.26	1848
4	GUIDE	used	260182304	9.22	18114	1.000	0.014	-0.094	0.082	0.133	178.643100	23.810976	1218.20	443
5	GUIDE	used	260186296	9.58	18110	1.000	-0.088	0.097	0.110	0.179	179.246996	23.604894	412.56	-1520
6	GUIDE	used	260188192	9.15	18006	1.000	0.100	0.086	0.100	0.164	179.330149	22.976535	-1856.62	-1728
7	GUIDE	used	260188952	9.54	18108	1.000	0.099	-0.071	0.112	0.190	178.359974	22.948174	-1852.70	1489

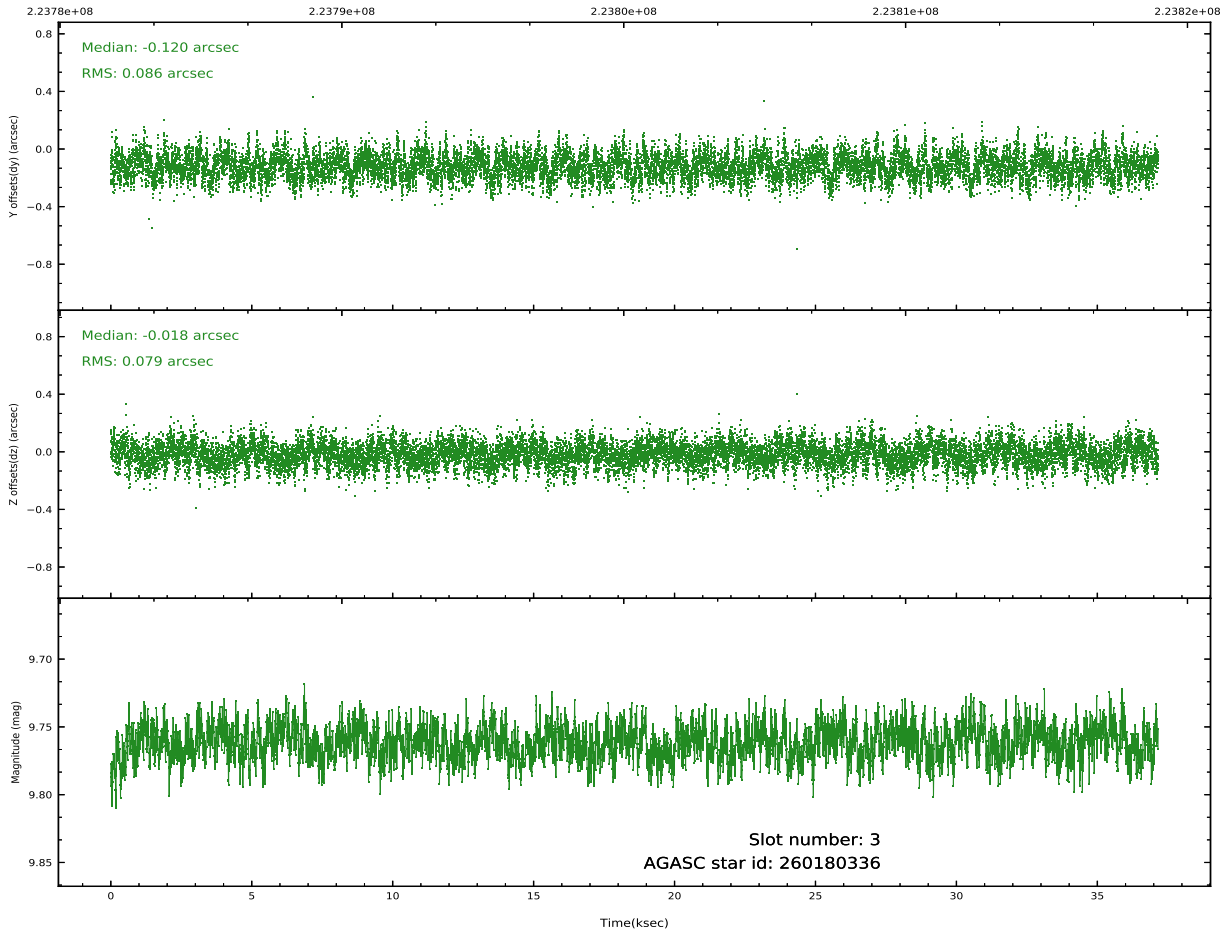
∞

## 2.4 Star Slots

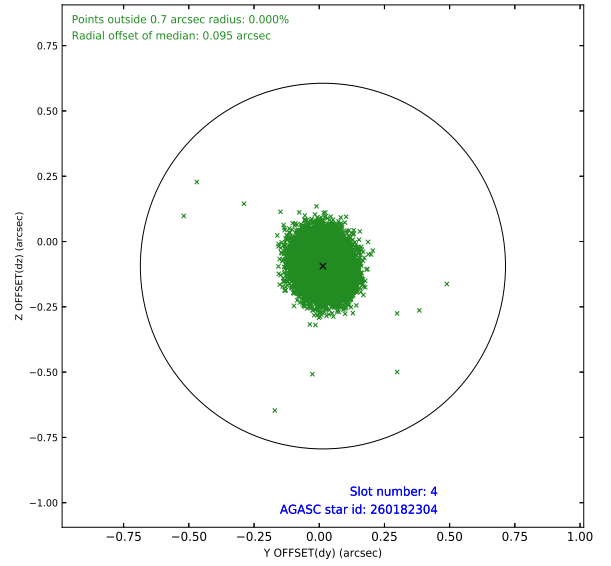
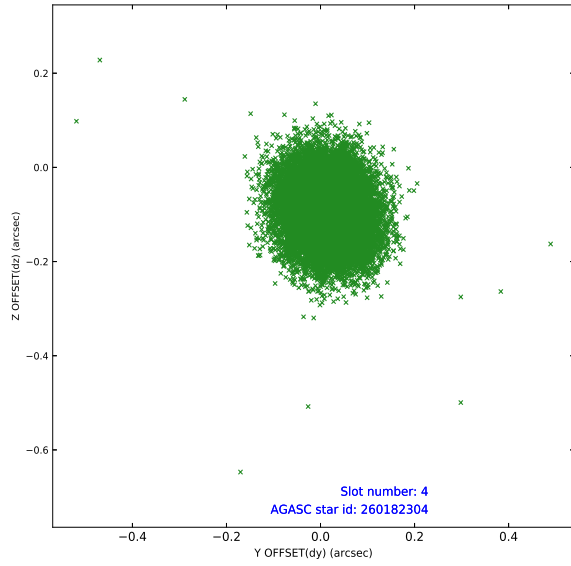
### 2.4.1 Slot 3



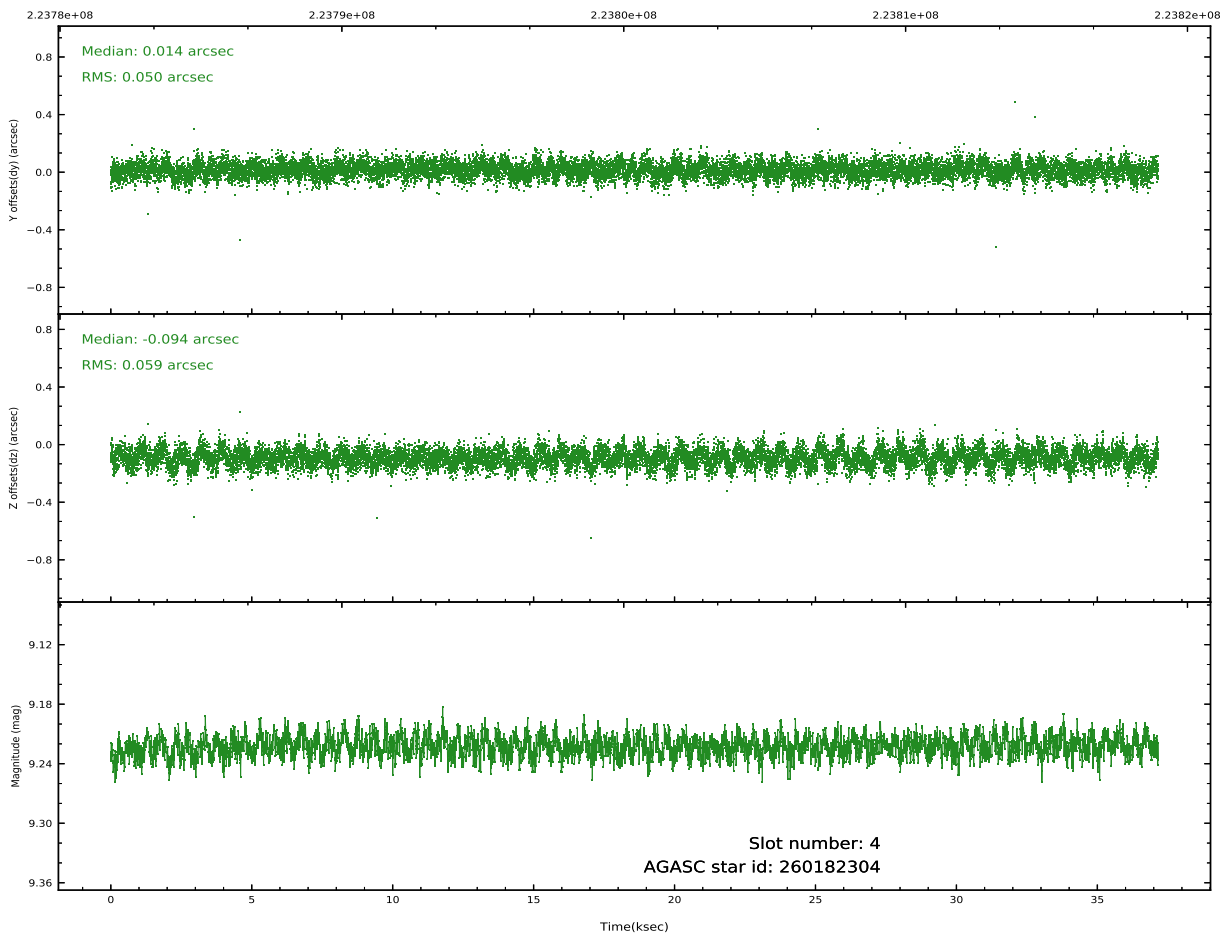
Time (s)



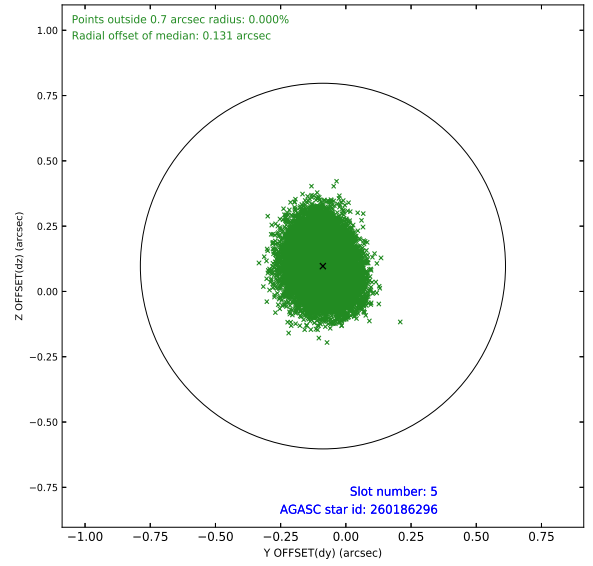
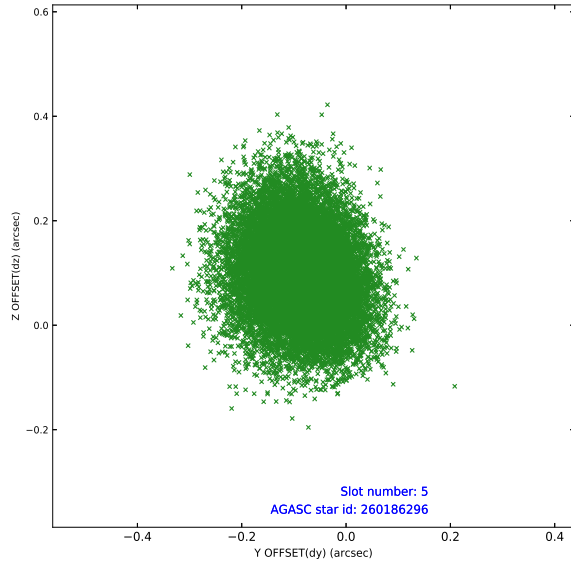
## 2.4.2 Slot 4



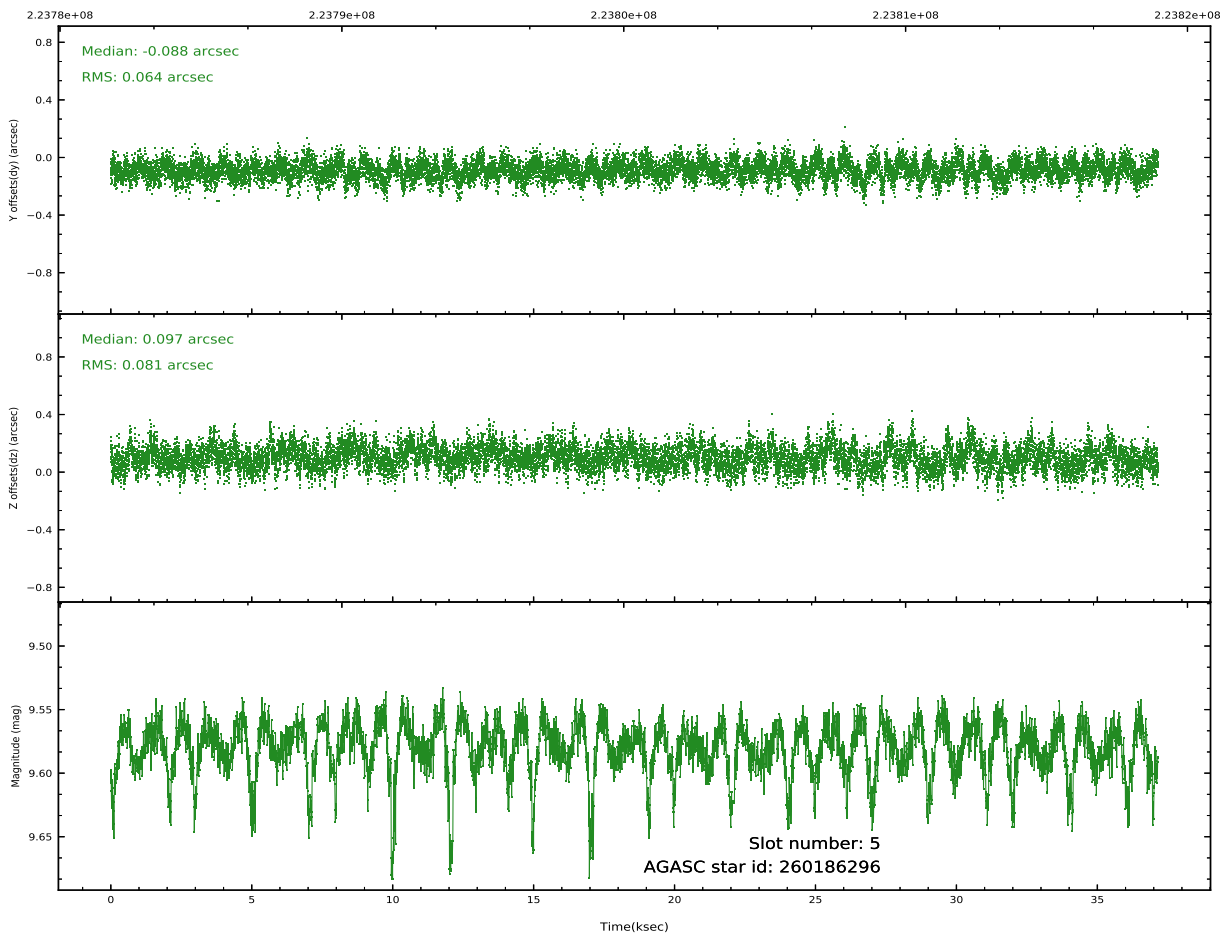
Time (s)



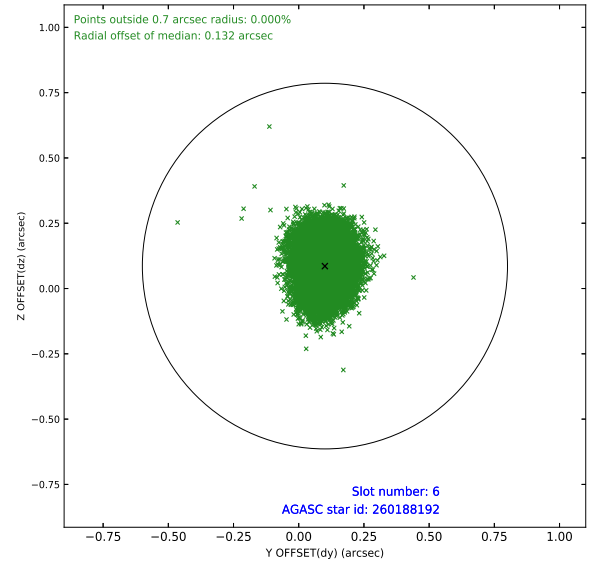
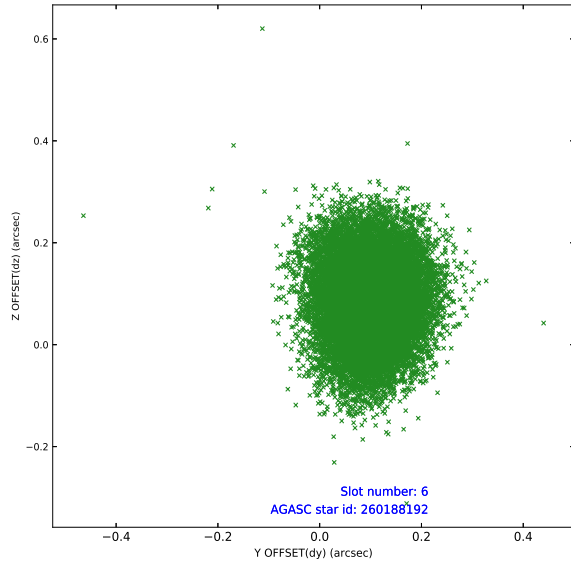
### 2.4.3 Slot 5



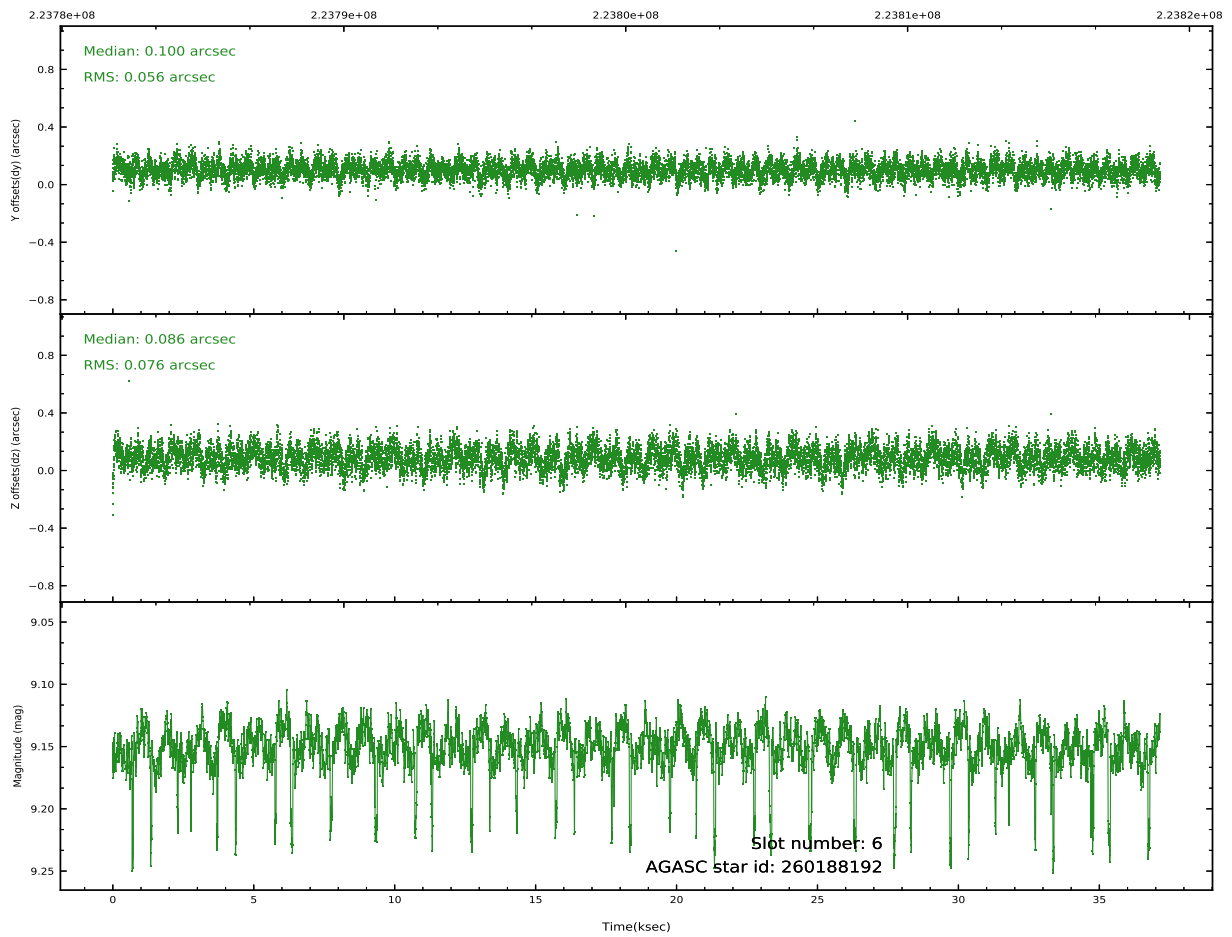
Time (s)



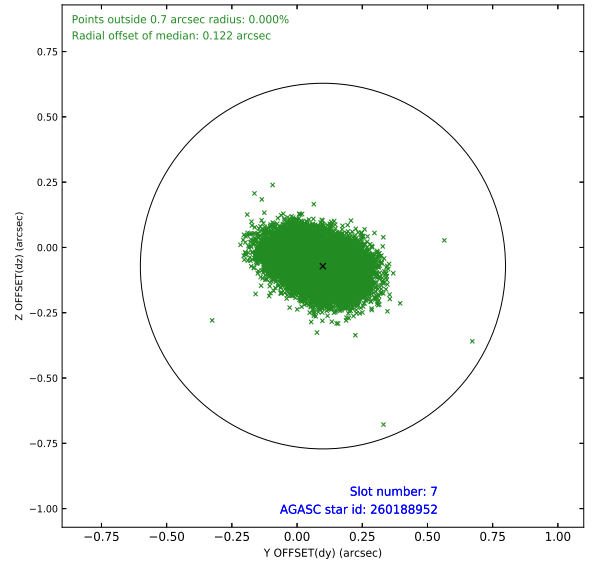
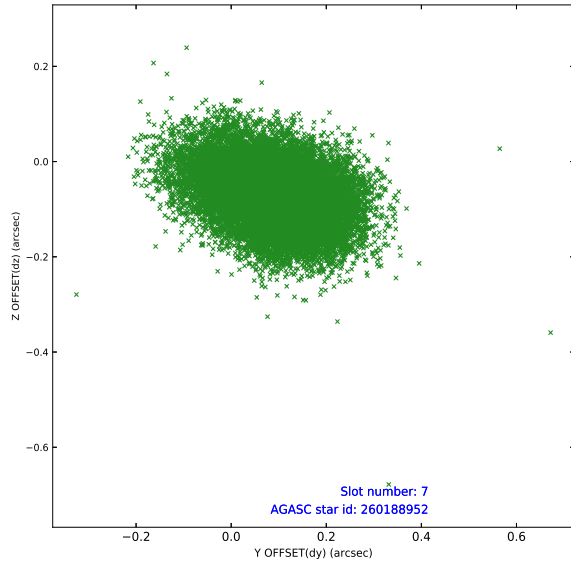
## 2.4.4 Slot 6



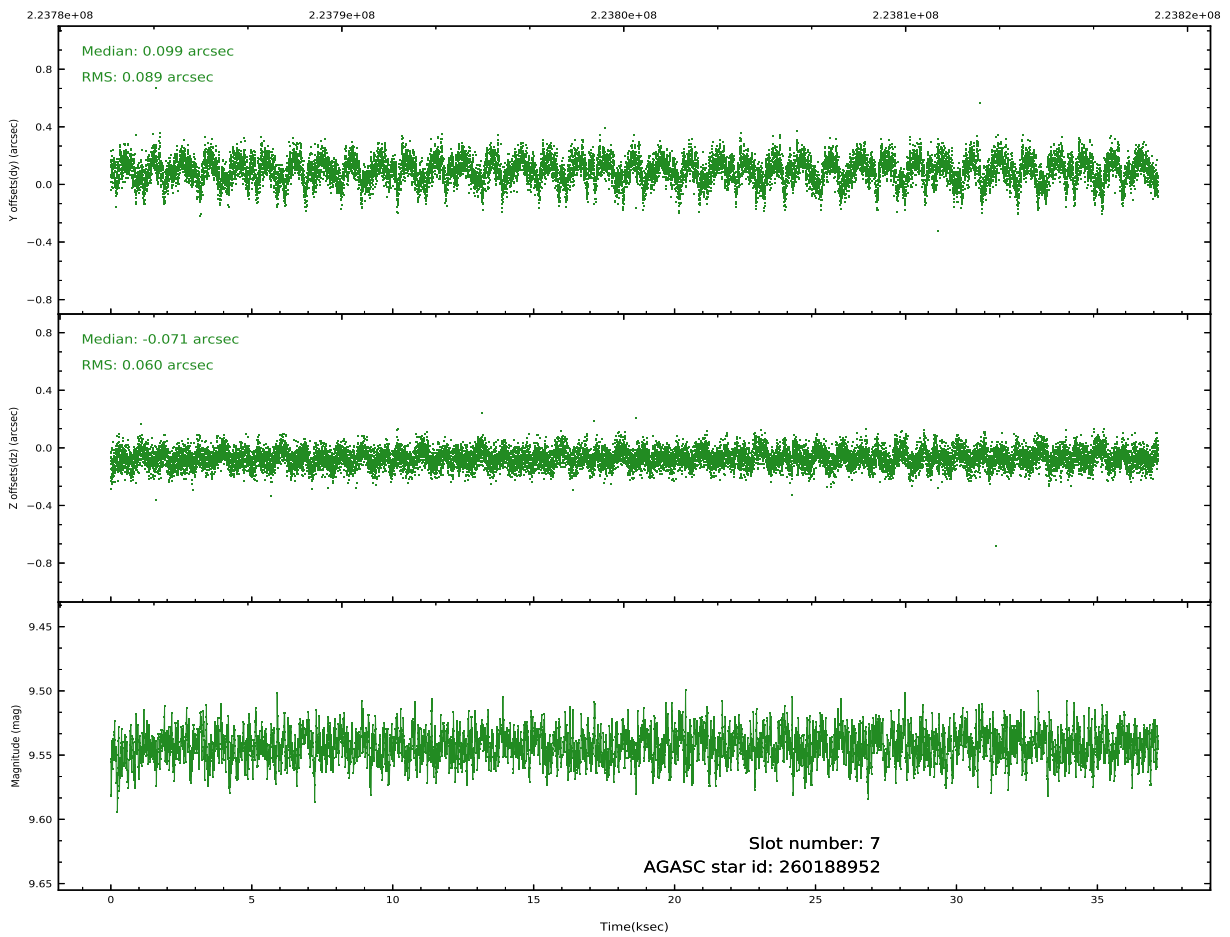
Time (s)



## 2.4.5 Slot 7

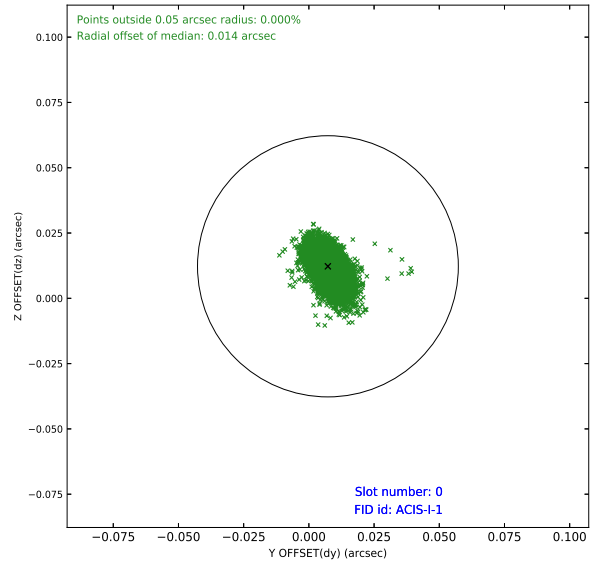
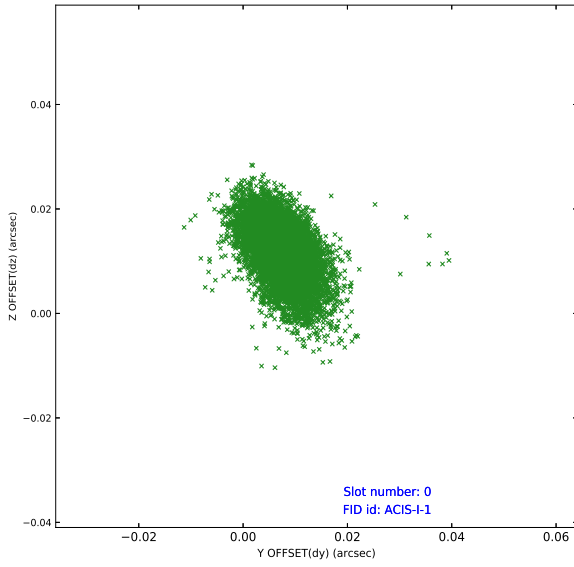


Time (s)

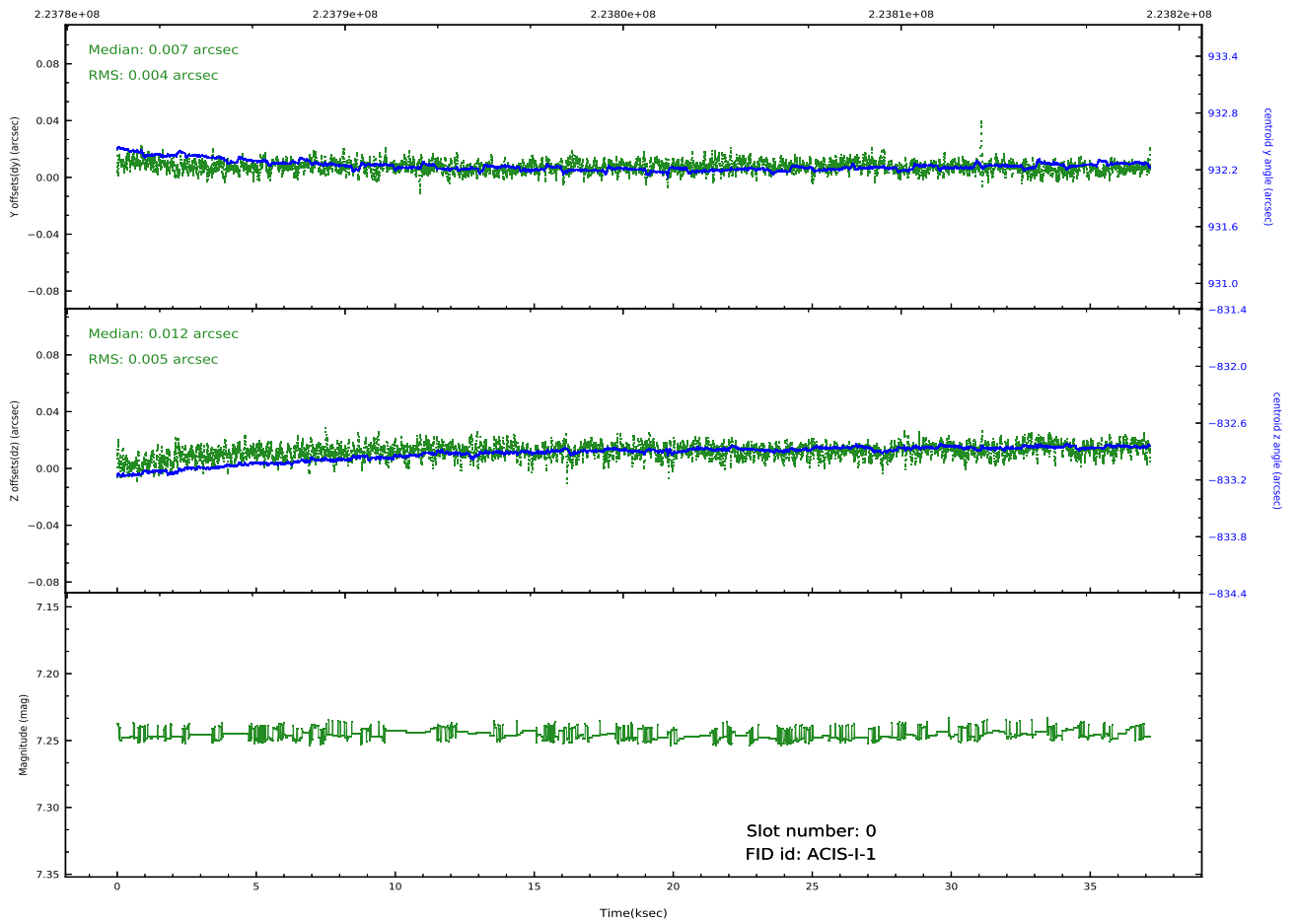


## 2.5 FID Slots

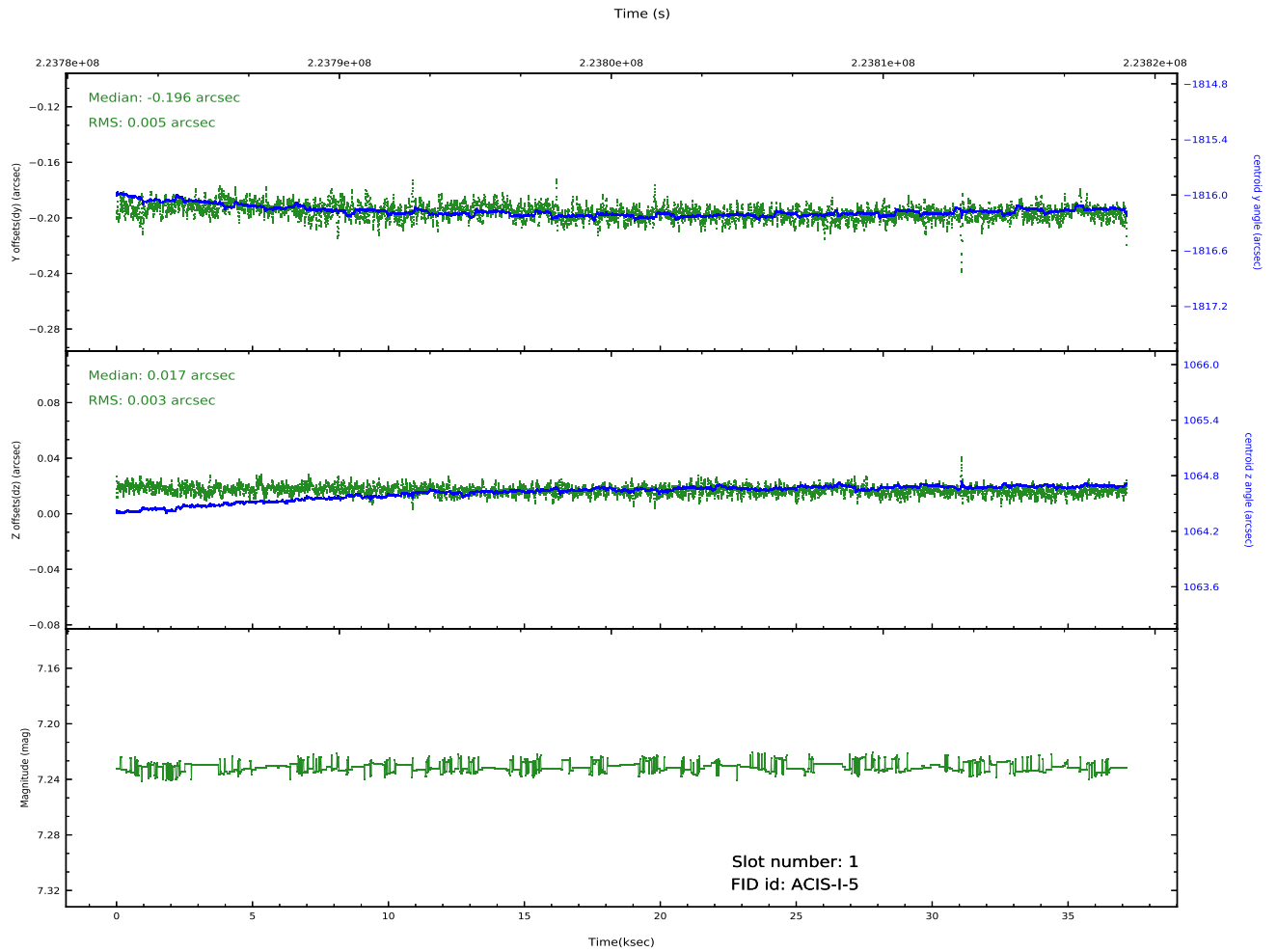
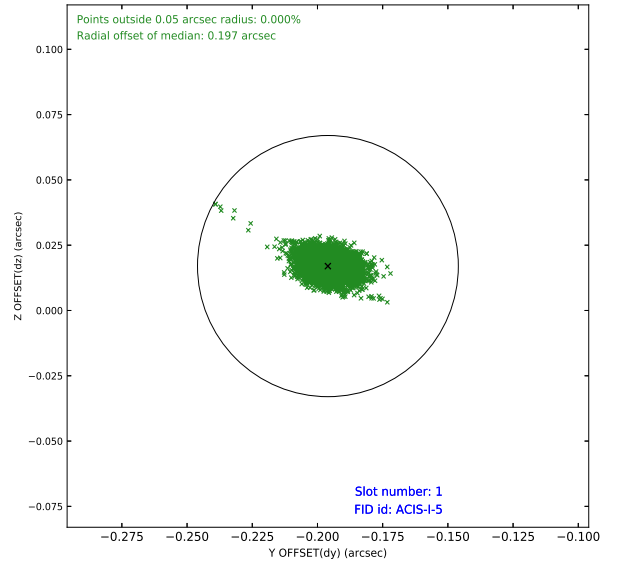
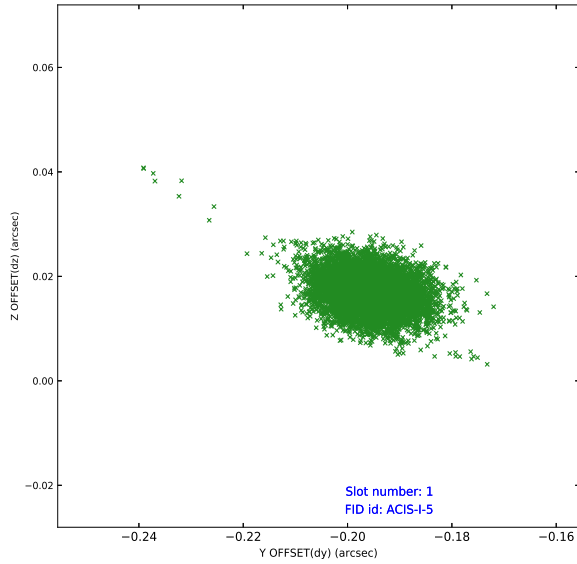
### 2.5.1 Slot 0



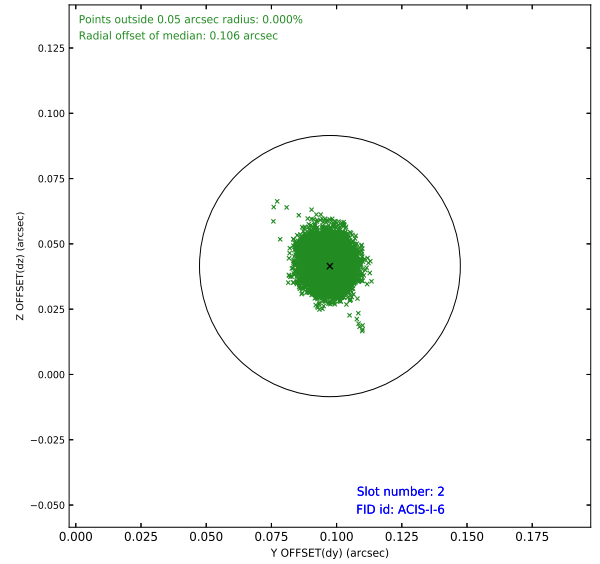
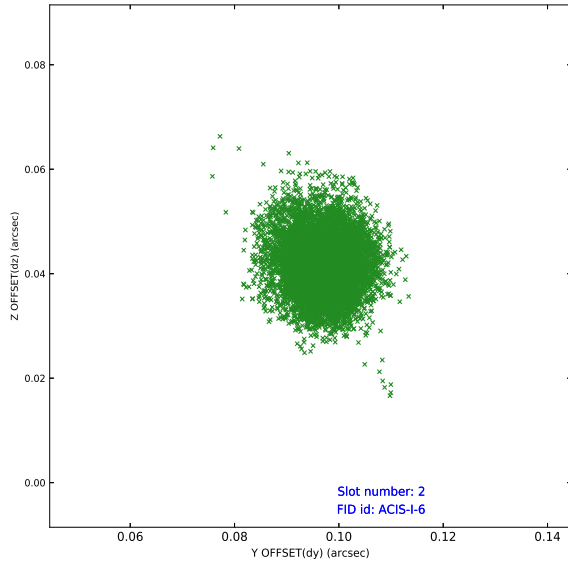
Time (s)



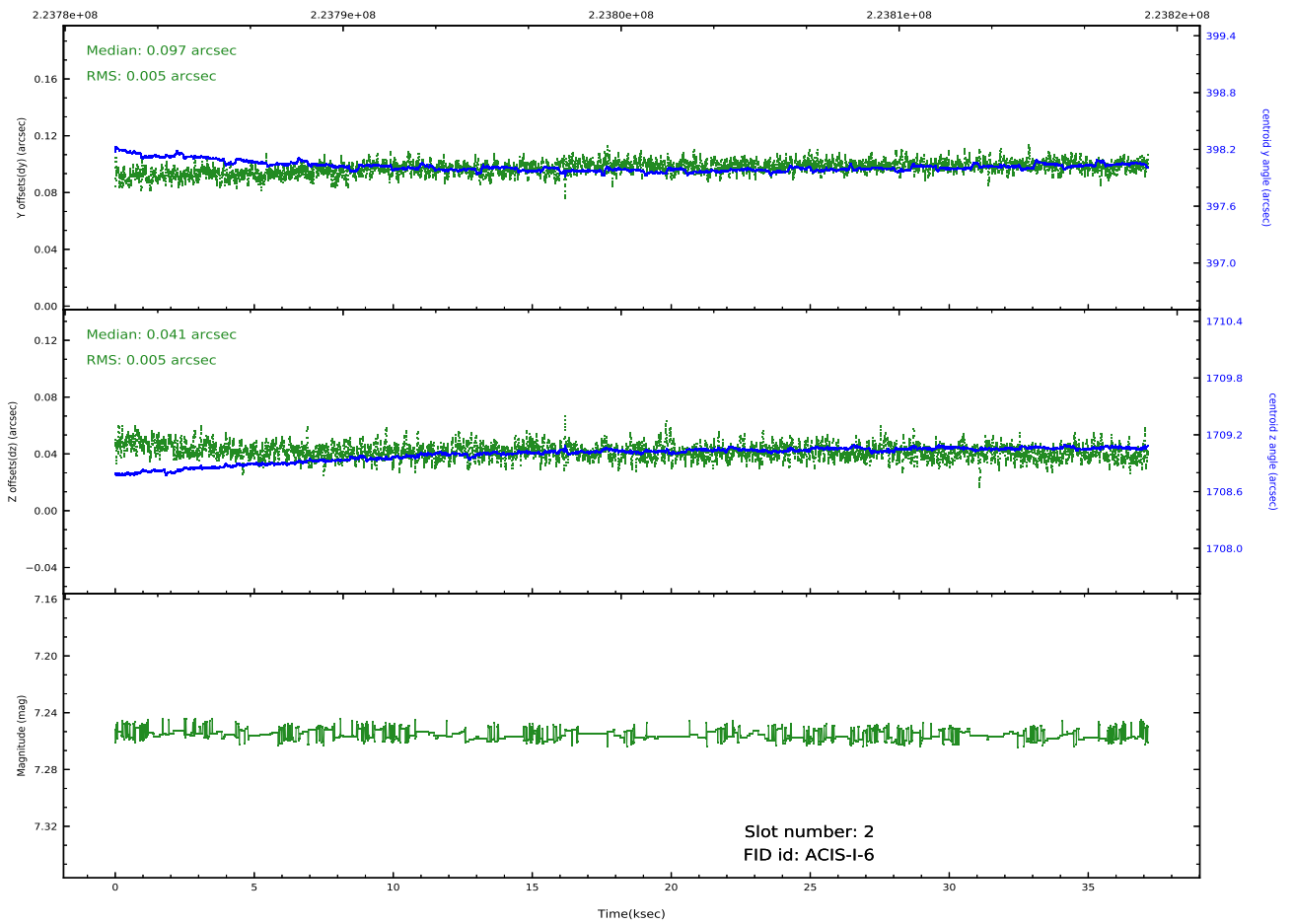
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	37.14725

## A.2 Comments